## REMARKS

Claims 1 through 54 are now presented for examination. Claims 1 through 41 have been cancelled without prejudice or disclaimer of subject matter. Claims 42 through 53 have been added to assure Applicants of the full measure of protection to which they deem themselves entitled. Claims 42, 50 and 51 are the only independent claims.

Cancelled Claims 1-5, 7-11, 13-22, 24-27, 29-33 and 41 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,433,785 to Saito in view of U.S. Patent No. 6,451,507 to Suenaga et al. Cancelled Claims 34-40 were rejected under 35 U.S.C. §103 as being unpatentable over Saito in view of Suenaga et al. and further in view of U.S. Patent No. 6,487,472 to Song et al. With regard to newly added Claims 42 through 53, these rejections are respectfully traversed.

Newly added independent Claim 42 is directed to an exposure processing system in which an exposure apparatus exposes a wafer to a pattern on a reticle in a first atmosphere. A reticle stocker has a sealing member and an atmosphere controller that controls the interior of the sealing member at a second atmosphere for stocking the reticle in the second atmosphere. A transfer path transfers the reticle from the reticle stocker to the exposure apparatus and transfers the reticle from the exposure apparatus to the reticle stocker. A load-lock chamber transfers the reticle to the reticle stocker after the reticle is received from the exterior of the exposure processing system and an atmosphere replacement is performed to change the exterior atmosphere to the second atmosphere.

In Applicants' view, Saito discloses a semiconductor device fabrication apparatus that has a thermal treatment device for thermally processing a semiconductor substrate, a first oxygen monitor for monitoring the density of oxygen in said thermal treatment device, a load-lock chamber separably coupled to said thermal treatment device for

housing the semiconductor substrate before thermal treatment thereof by said thermal treatment device, and a second oxygen monitor for monitoring the density of oxygen in said load-lock chamber. First, the semiconductor substrate is introduced into the load-lock chamber, and then the load-lock chamber is evacuated. Thereafter, the density of oxygen in the load-lock chamber is measured by the second oxygen monitor, and the thermal treatment device is evacuated, after which the density of oxygen in the thermal treatment device is measured by the first oxygen monitor. The semiconductor substrate is introduced from the load-lock chamber into the thermal treatment device after the densities of oxygen in the load-lock chamber and the thermal treatment device as measured by the first and second oxygen monitors, respectively, have dropped below a predetermined level. A thin film is deposited on the semiconductor substrate in the thermal treatment device.

In Applicants' opinion, Suenaga et al. discloses an exposure apparatus arrangement for use in photolithographically manufacturing devices such as semiconductor devices, image pickup devices, liquid crystal display devices and thin film magnetic heads. The apparatus is capable of transferring onto a substrate (W) the image of a pattern on a reticle (R) and includes a light source (2) capable of supplying an exposure energy beam (IL) with a wavelength under 200 nm, and an illumination optical system arranged to receive the exposure energy beam from said light source. The illumination optical system is designed to guide the exposure energy beam to the reticle. The apparatus also includes a projection optical system (PL) arranged between the reticle and the substrate. The projection optical system is capable of forming an image of the reticle pattern onto the substrate based on the exposure energy beam passing through the reticle. The projection optical system has a plural refractive optical members. At least two such refractive optical members are arranged along an optical path of said exposure energy beam, and each refractive optical member is made of at least two

types of fluoride crystalline materials.

According to the invention of Claim 42, a load-lock chamber transfers a reticle to the reticle stocker after the reticle is received from the exterior of the exposure processing system and an atmosphere replacement is performed to change exterior atmosphere to the second atmosphere. Advantageously, the transfer from the load-lock chamber provides easy control of the interior of the reticle stocker to the second atmosphere.

Saito may teach a cassette chamber 1 which corresponds to the stocker of Claim 42, transferring wafer cassettes to the cassette chamber 1 through a gate valve 2 mounted on the exterior of the cassette chamber 1 and evacuating the cassette chamber 1. In Saito, however, the atmosphere of the cassette chamber interior is contaminated by the flow of external atmosphere from gate valve 2 every time a wafer cassette 9 is transferred through the gate valve 2 into the cassette chamber. In contrast to Saito, it is a feature of Claim 42 that a load-lock chamber between a reticle stocker and the exterior of an exposure processing system is used to transfer a reticle to the reticle stocker after the reticle is received from the exposure processing system exterior and atmosphere replacement is performed to change the exterior atmosphere to a second atmosphere so that contamination by flow of exterior atmosphere in the reticle stocker is prevented. Further, Saito is directed to processing a wafer in a reaction chamber in which the wafer is processed and transferred to a cassette chamber and then to outside as a one time processing while in the present invention, a transfer path transfers a reticle between the reticle stocker and exposure apparatus in a recirculating manner.

Suenaga et al. may disclose a reticle stocker 210 that stocks a reticle. The Suenaga et al. disclosure, however, is devoid of any teaching or suggestion that the reticle stocker 210 has its sealing member interior controlled to a second atmosphere as in Claim 42.

Further, Suenaga et al. fails to teach or suggest anything about a load-lock chamber that transfers a reticle to a reticle stocker after the reticle is received from the exposure processing system exterior and atmosphere replacement has been performed to change the exterior atmosphere to the second atmosphere as in Claim 42.

With regard to the cited combination, Saito is restricted to transferring wafer cassettes to a cassette chamber 1 through a gate valve 2 mounted on the exterior of the cassette chamber 1 and then evacuating the cassette chamber whereby the interior of the cassette chamber interior is contaminated by the flow of external atmosphere from gate valve 2 every time a wafer cassette 9 is transferred. Suenaga et al. is devoid of any suggestion of a reticle stocker controlled to a second atmosphere. Accordingly, it is not seen that the addition of Suenaga et al.'s reticle stocker without a controlled atmosphere to Saito's transfer of a wafer with atmosphere change in the cassette chamber (wafer stocker) could possibly suggest the feature of Claim 42 of a load-lock chamber that transfers a reticle to a reticle stocker after the reticle is received from the exterior of the exposure processing system and an atmosphere replacement is performed to change exterior atmosphere to the second atmosphere. It is therefore believed that newly added Claim 42 is completely distinguished from any combination of Saito and Suenaga et al. and is allowable.

Newly added Independent Claim 50 is directed to a stocker that stocks a substrate covered with a substrate cover. In the stocker, a sealing member stores the substrate covered with a substrate cover. A first atmosphere controller controls the interior of the substrate cover to a first atmosphere and a second atmosphere controller controls the space between the interior of the sealing member and the exterior of the substrate cover to a second atmosphere. Control of the first atmosphere controller and control of the second atmosphere controller are performed simultaneously.

In accordance with the invention of Claim 50, the interior of the substrate cover is controlled to the first atmosphere and the space between the interior of the sealing member and the exterior of the substrate cover is controlled to the second atmosphere. The first atmosphere control and the second atmosphere control are simultaneously performed.

As discussed with respect to Claim 42, Saito only discloses control of atmosphere in the interior of a cassette chamber 1 and the exterior of the wafer 9 by a cassette chamber pump 10. There is no suggestion in Saito, however, about simultaneously controlling a first atmosphere of a substrate cover and a second atmosphere of a space between a sealing member of a stocker and the exterior of the substrate cover as in Claim 50. Further, Saito's atmosphere control of a wafer 11 in a load-lock chamber 5 fails to suggest anything concerning simultaneous control of the atmosphere of a substrate cover and the atmosphere of a space between the substrate cover and a sealing member in which the substrate is located as in Claim 50.

Suenaga et al. is devoid of any disclosure of a substrate cover that covers a substrate stored in a sealing member of a stocker as in Claim 50. As a result, it is not seen that the addition of Suenaga et al.'s stocker without any substrate cover arrangement to Saito's atmosphere control devoid of any suggestion of simultanously controlling different atmospheres in a sealing member could possibly suggest the features of Claim 50. It is therefore believed that newly added Claim 50 is completely distinguished from any combination of Saito and Suenaga et al. and is allowable.

Newly added independent Claim 51 is directed to an exposure processing system in which an exposure apparatus performs an exposure process for a substrate covered with a substrate cover in a first atmosphere. A substrate stocker has a sealing member and an atmosphere controller that controls the interior of the substrate cover to a second atmosphere

and for controlling the space between the interior of the sealing member and the exterior of the substrate cover to a third atmosphere. A transfer path transfers the substrate between the exposure apparatus and the substrate stocker.

It is a feature of Claim 51 that the atmosphere of the substrate covered by a substrate cover is controlled to the first atmosphere, the atmosphere of the sealing member storing the substrate is controlled to the second atmosphere and the space between the interior of the sealing member and the exterior of the substrate cover is controlled to the third atmosphere. As discussed with respect to Claim 50, Saito is devoid of any suggestion of different atmospheres for substrates, substrate covers and space between a substrate cover and the interior of the sealing member as in Claim 51 or different atmosphere control in a load-lock chamber. It is therefore not seen that the addition of Suenaga et al.' reticle stocker devoid of substrates to Saito's atmosphere control without different atmospheres for substrates, substrate covers and spaces in a sealing member could possibly suggest the combination of features of Claim 51. Accordingly, it is believed that newly added Claim 51 is completely distinguished from any combination of Saito and Suenaga et al. and is allowable.

A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record. Applicants submit that the cancellation of Claims 1-41 and the addition of independent Claims 42, 50 and 51clarify Applicants' invention and serve to reduce any issues for appeal.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the

invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable consideration and early passage to issue of the present application. The Examiner is respectfully requested to enter this Amendment After Final Action under 37 C.F.R. § 1.116.

Applicants' attorney, Steven E. Warner, may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

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